Math 1075
Score Key

Page 3

(1) Statistics
(2) Data
(3) Ranking
(4) range
(5) arithmetic mean

Page 4

(6) 64, 78, 82, 84, 85, 85, 88, 90
(7) difference . . . largest . . . smallest
(8) 90 – 64 = 26
(9) sum . . . divide . . . total number
(10) 84.5 $\frac{84 + 85}{2} = \frac{169}{2} = 84.5$
(11) mode
(12) 85
(13) 84
(14) To love others more and to overlook their mistakes

Page 5

(1) 42
(2) 3, 99
(3) **(a)** 101, 103, 106, 108, 110, 110, 112, 130
(b) 29 $130 - 101 = 29$
(c) 110 $\frac{880}{8} = 110$
(d) 109 $\frac{108 + 110}{2} = 109$
(e) 110
(f) 130
(4) **(a)** 31, 54, 54, 55, 57, 58, 58, 63, 65
(b) 34 $65 - 31 = 34$
(c) 55 $\frac{495}{9} = 55$
(d) 57
(e) 54, 58
(f) 31
(5) **(a)** 1.2, 4.1, 4.3, 4.6, 5.2, 5.5, 5.8, 7.7
(b) 6.5 $7.7 - 1.2 = 6.5$
(c) 4.8 $\frac{38.4}{8} = 4.8$
(d) 4.9 $\frac{4.6 + 5.2}{2} = 4.9$
(e) None
(f) 1.2, 7.7

Page 6

(1) **(a)** 16, 17, 19, 19, 21, 21, 21, 22, 24
(b) 8 $24 - 16 = 8$
(c) 20 $\frac{180}{9} = 20$
(d) 21
(e) 21
(2) **(a)** $3\frac{1}{3}, 3\frac{1}{2}, 3\frac{2}{3}, 3\frac{2}{3}, 4\frac{1}{2}, 4\frac{5}{6}, 5\frac{1}{6}$
(b) $1\frac{5}{6}$ $5\frac{2}{12} - 3\frac{4}{12} = 4\frac{14}{12} - 3\frac{4}{12} = 1\frac{10}{12} = 1\frac{5}{6}$
(c) $4\frac{2}{21}$ $3\frac{4}{12} + 3\frac{6}{12} + 3\frac{8}{12} + 3\frac{8}{12} + 4\frac{6}{12} + 4\frac{10}{12} + 5\frac{2}{12} = 28\frac{8}{12} \div 7 = \frac{86}{3} \div \frac{7}{1} = \frac{86}{3} \cdot \frac{1}{7} = \frac{86}{21} = 4\frac{2}{21}$
(d) $3\frac{2}{3}$
(e) $3\frac{2}{3}$
(3) **(a)** 1.7, 2.1, 2.3, 2.4, 2.5, 2.6, 2.7, 2.7, 2.8, 3.1
(b) 1.4 $3.1 - 1.7 = 1.4$
(c) 2.49 $\frac{24.9}{10} = 2.49$
(d) 2.55 $\frac{2.5 + 2.6}{2} = 2.55$
(e) 2.7
(4) Forbearing one another . . . forgiving one another . . . as Christ forgave you

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Page 7

(5) (a) $3\frac{3}{8}, 4\frac{1}{8}, 4\frac{1}{4}, 4\frac{1}{2}, 4\frac{1}{2}, 4\frac{1}{2}, 4\frac{3}{4}, 4\frac{7}{8}$

(b) $4\frac{7}{8} - 3\frac{3}{8} = 1\frac{4}{8} = 1\frac{1}{2}$

(c) $3\frac{3}{8} + 4\frac{1}{8} + 4\frac{2}{8} + 4\frac{4}{8} + 4\frac{4}{8} + 4\frac{4}{8}$

$+ 4\frac{6}{8} + 4\frac{7}{8} = 31\frac{31}{8} \div 8 = \frac{279}{8} \div \frac{8}{1}$

$= \frac{279}{8} \cdot \frac{1}{8} = \frac{279}{64} = 4\frac{23}{64}$

(d) $4\frac{1}{2}$

(e) $4\frac{1}{2}$

(6) (a) 3.3, 5.1, 43.8, 47.2, 93.2, 99.1, 182.9, 224

(b) 220.7

(c) 87.325

(d) 70.2 $\frac{47.2 + 93.2}{2} = 70.2$

Page 8

(1) 4

(2) 4

(3) 17

(4) 15

(5) 15

(6)

Score	Tally	Frequency
75	II	2
80	III	3
85	IIII	4
90	III	3
95	II	2
100	I	1

(7) 25

(8) 85

(9) 86

(10) 85

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(11)

Score	Tally	Frequency
80	II	2
85	III	3
90	III	3
95	IIII	4
100	III	3

(12) 20

(13) 95

(14) 91

(15) 5 points

(16)

Temperature	Tally	Frequency
31–32	II	2
33–34		0
35–36	𝍸	5
37–38	III	3
39–40	III	3
41–42	𝍸 II	7
43–44	III	3
45–46	I	1
47–48	IIII	4
49–50	II	2

(17) 18

(18) 41

(19) 41

(20) 41

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(1) Self Test Scores

(2) 100% – 75% = 25%

(3) At least 90% but less than 95%

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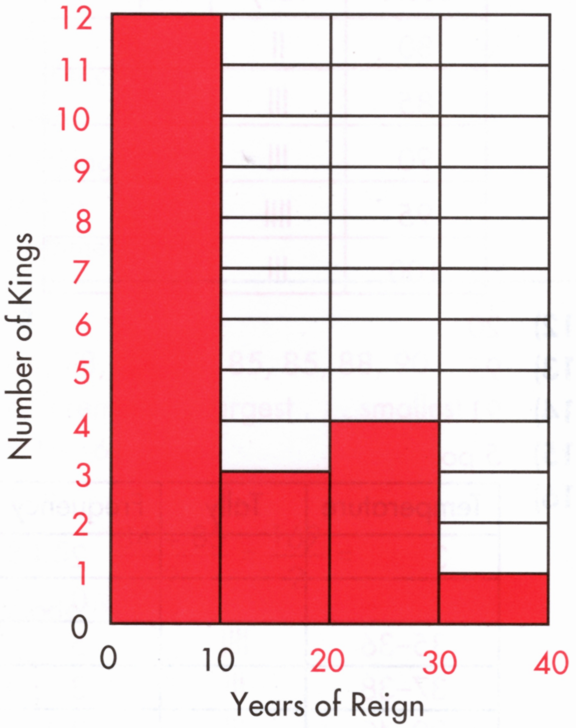
(4)

Years of Reign	Tally	Frequency
0 to 10	𝍸 𝍸 II	12
11 to 20	III	3
21 to 30	IIII	4
31 to 40	I	1

(5) Reign by Years of the Kings of Israel



(6) Forbearing one another . . . forgiving one another . . . as Christ forgave you

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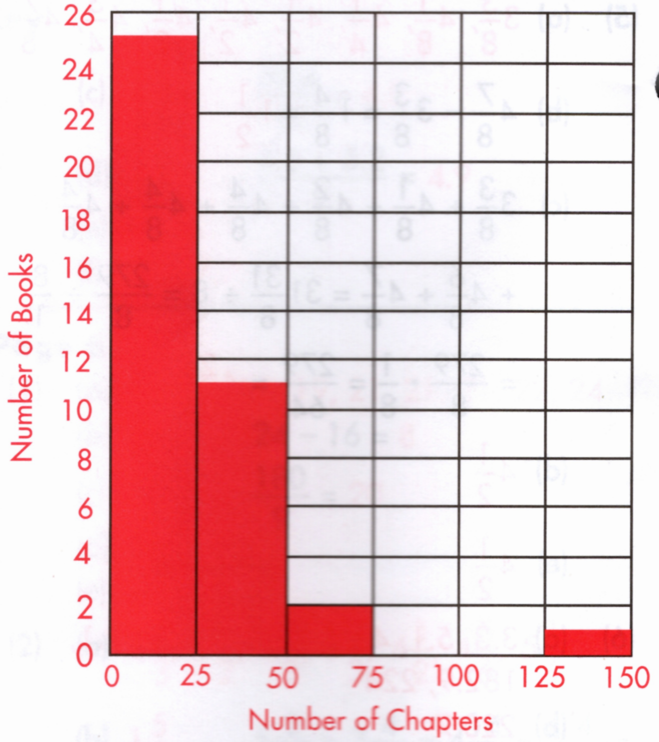
Page 12

(7)

Number of Chapters	Tally	Frequency
1 to 25	𝍸 𝍸 𝍸 𝍸 𝍸	25
26 to 50	𝍸 𝍸 |	11
51 to 75	||	2
76 to 100		0
101 to 125		0
126 to 150	|	1

(8) Chapters in the Old Testament



Page 13

(1) 8 . . . 35

(2) 16

(3) 171

(4) 19

Page 15

(1) 200-Meter Dash Times

Stem	Leaf
23	3 7
24	1 6 8
25	0 3 6 9
26	3

Key – 23|3 = 23.3

(2) 24.9

(3) 10

(4) 23.3

(5) No . . . No

(6) Bus Riders

Stem	Leaf
3	4 5 6 8 9
4	0 1 2 2 4 7
5	3 5

Key – 3|4 = 34

(7) 55 riders
(8) 34 riders
(9) 42 riders

Page 16

(10) Average Temperature

Stem	Leaf
20	2 3
22	3
24	9
25	2
28	1 4 4 6
29	7

Key – 20|2 = 20.2

(11) 10 cities
(12) 26.7°C
(13) 25.6°C
(14) Average Temperature

Stem	Leaf
1	3 5 5 6
2	6
3	2 6
4	8
5	3
6	3 6

Key – 1|3 = 1.3

(15) 5.3°C
(16) 28.4°C

Page 17

(1) B
(2) I
(3) F
(4) G
(5) H
(6) J
(7) C
(8) E
(9) D
(10) A
(11) **(a)** 113, 114, 115, 115, 116, 119, 127
(b) 14 $127 - 113 = 14$
(c) 117 $\frac{819}{7} = 117$
(d) 115
(e) 115

(12) **(a)** $3\frac{1}{3}, 3\frac{1}{2}, 3\frac{2}{3}, 4\frac{1}{2}, 4\frac{1}{2}, 5\frac{1}{6}$

(b) $1\frac{5}{6}$ $5\frac{1}{6} - 3\frac{2}{6} = 4\frac{7}{6} - 3\frac{2}{6} = 1\frac{5}{6}$

(c) $4\frac{1}{9}$

$$3\frac{2}{6} + 3\frac{3}{6} + 3\frac{4}{6} + 4\frac{3}{6} + 4\frac{3}{6} + 5\frac{1}{6} =$$
$$22\frac{16}{6} = 24\frac{4}{6} = 24\frac{2}{3} \div 6 = \frac{74}{3} \cdot \frac{1}{6} =$$
$$\frac{74}{18} = 4\frac{1}{9}$$

(d) $4\frac{1}{12}$

$$3\frac{2}{3} + 4\frac{1}{2} = \frac{11}{3} + \frac{9}{2} = \frac{22}{6} + \frac{27}{6} = \frac{49}{6}$$
$$\frac{49}{6} \div 2 = \frac{49}{6} \cdot \frac{1}{2} = \frac{49}{12} = 4\frac{1}{12}$$

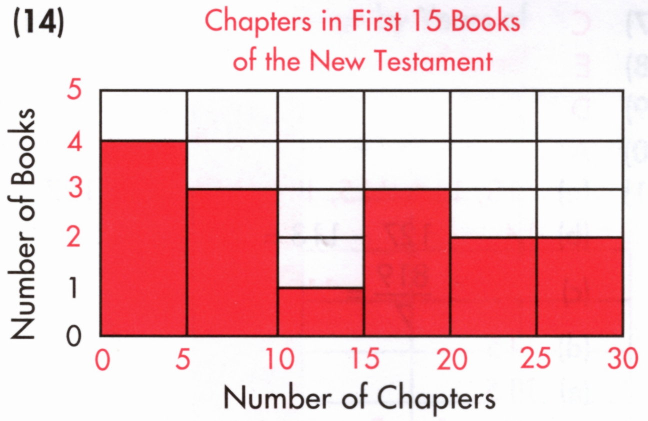
(e) $4\frac{1}{2}$

Page 18

(13)

Chapters	Tally	Frequency
1 to 5	IIII	4
6 to 10	III	3
11 to 15	I	1
16 to 20	III	3
21 to 25	II	2
26 to 30	II	2

(14)


Chapters in First 15 Books of the New Testament

(15)

Chapters

Stem	Leaf
0	3 4 4 5 6 6 6
1	3 6 6 6
2	1 4 8 8

Key – 1|3 = 13

(16) Forbearing one another . . . forgiving one another . . . as Christ forgave you

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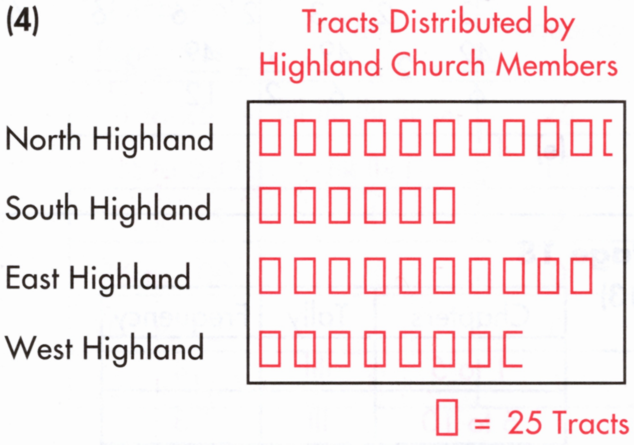
Page 20

(1) ▯

(2) 25

(3) 855

(4)


Tracts Distributed by Highland Church Members

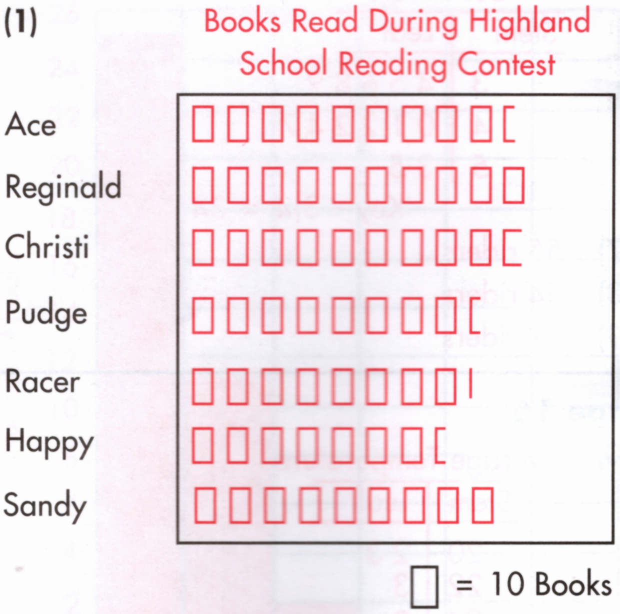
▯ = 25 Tracts

If any of your symbols are different, please check with your supervisor.

(5) Forbearing one another, . . . forgiving one another, . . . as Christ forgave you, so also do ye. Colossians 3:13

Page 21

(1)


Books Read During Highland School Reading Contest

▯ = 10 Books

(2) 120,000 men

(3) 232,000 men

(4) 200,000 men

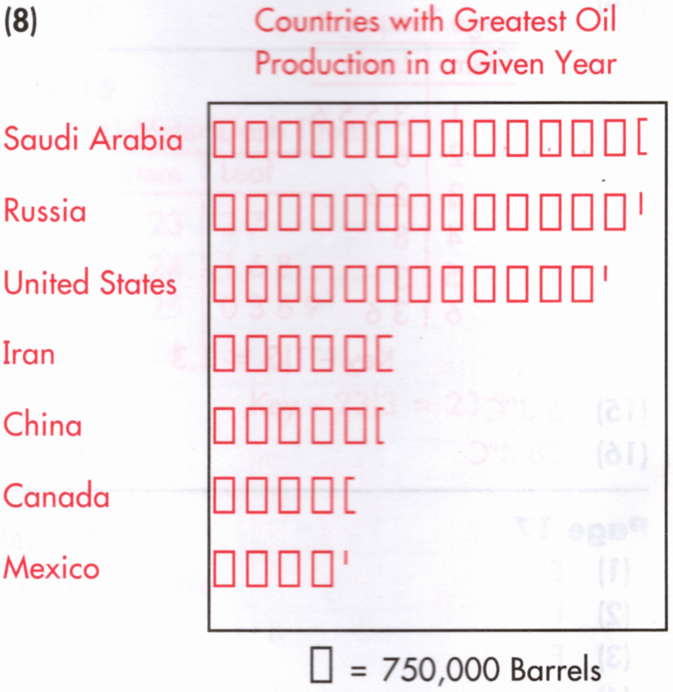
(5) 200,000 men

(6) 280,000 men

(7) 200,000 men

Page 22

(8)


Countries with Greatest Oil Production in a Given Year

▯ = 750,000 Barrels

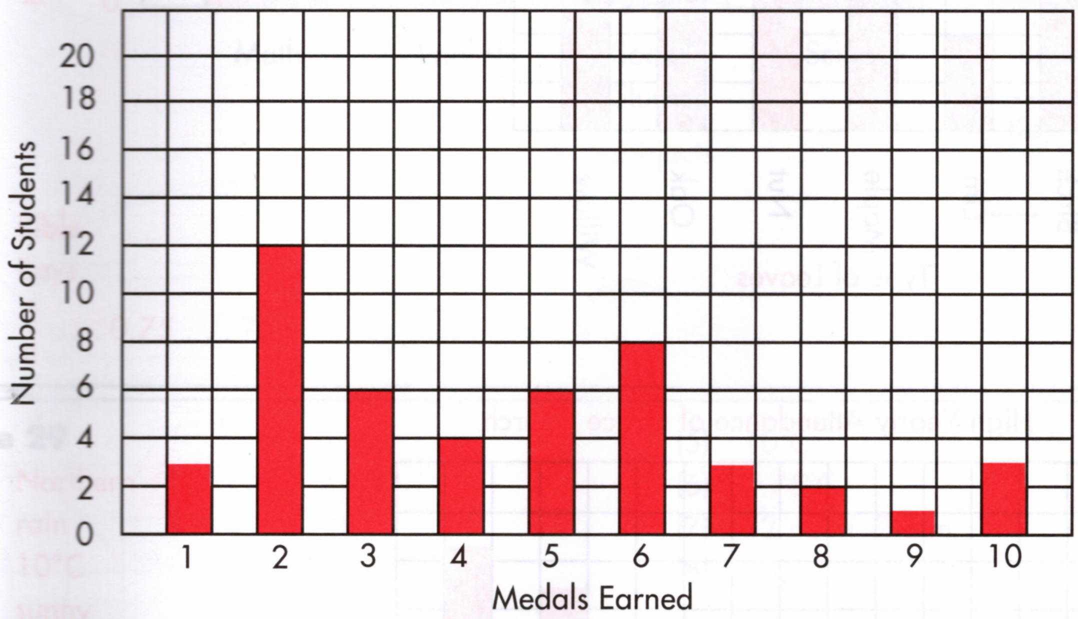
Page 23

(1) March
(2) February
(3) Yes . . . April and June
(4) 20 Bibles

Page 24

(5)

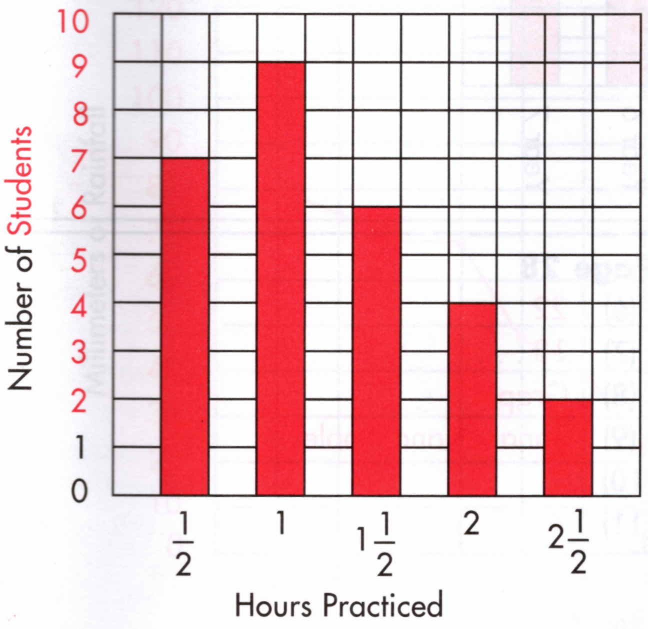
Number of Students Earning Medals at ISC



Page 25

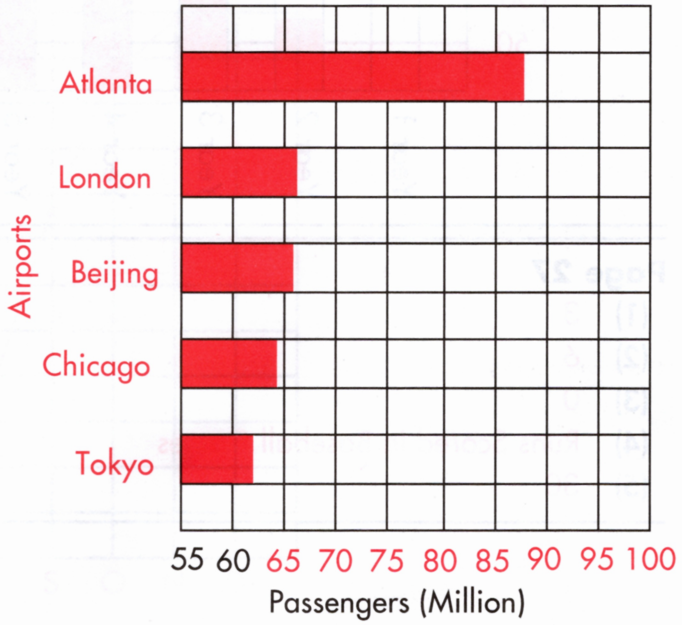
(1)

Practice Time for Piano Students



(2)

World's Busiest Airports



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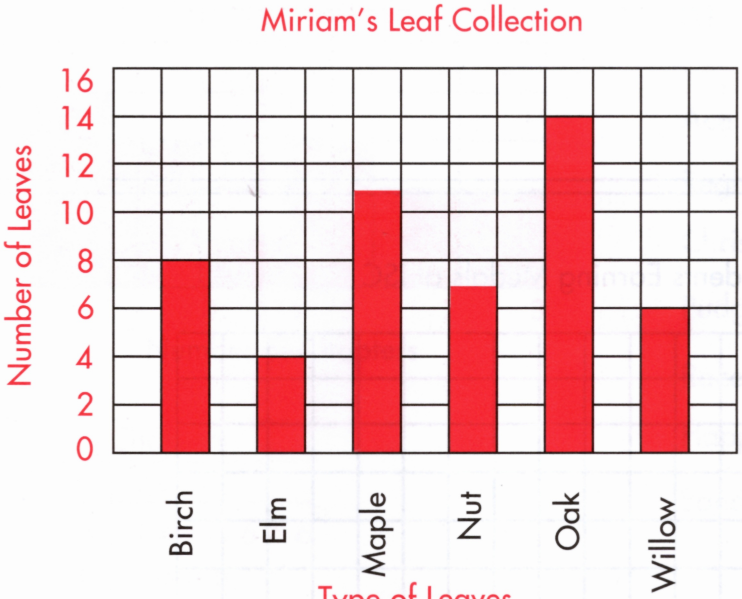
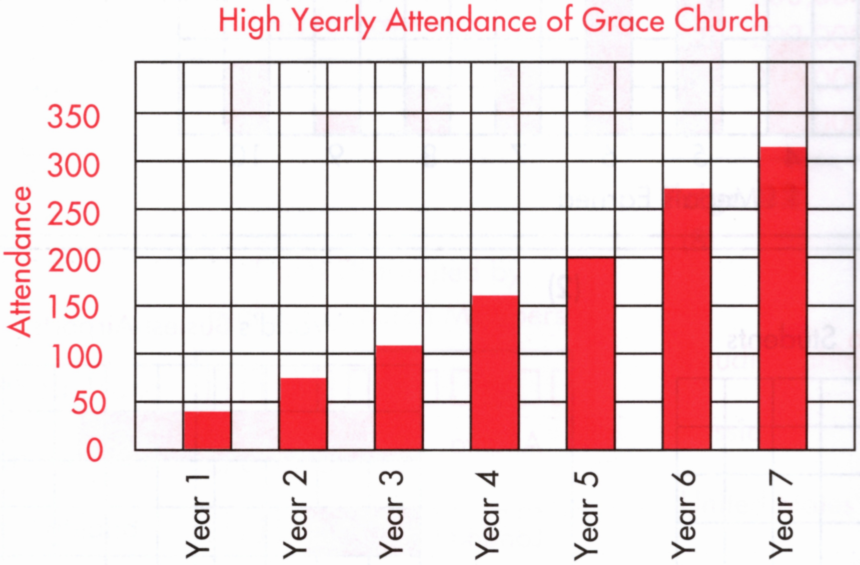
(3)



(4)



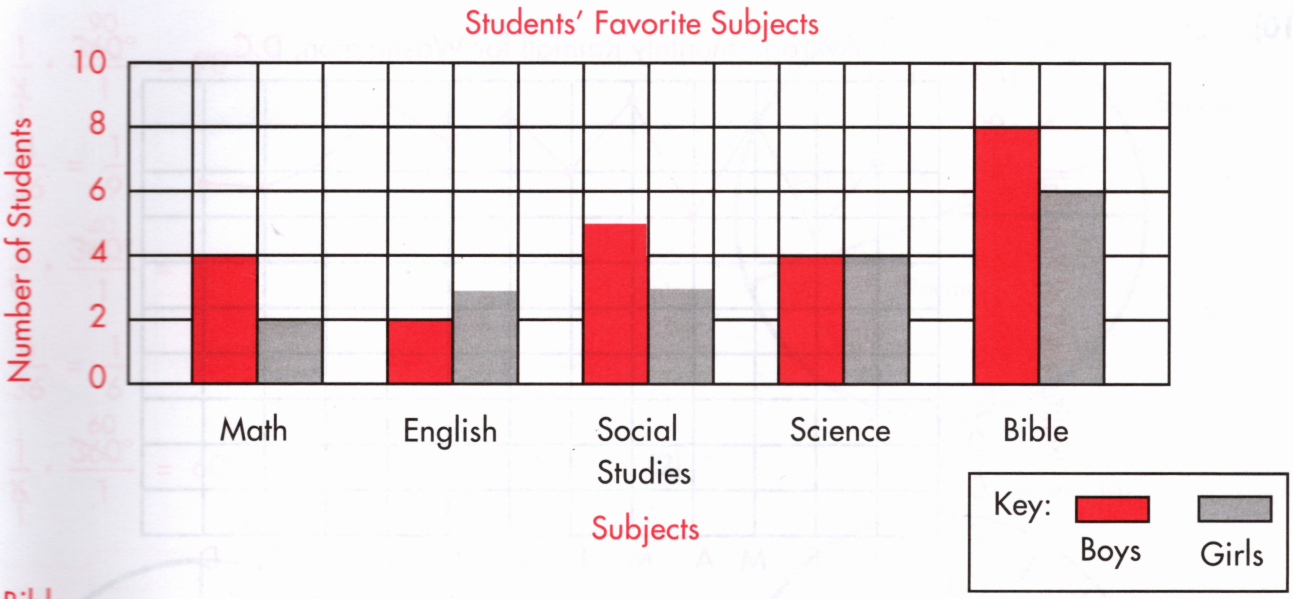
Page 27

(1) 3
(2) 6
(3) 0
(4) Runs Scored in Baseball Games
(5) 30

Page 28

(6) 22
(7) 13 . . . 9
(8) Grapes
(9) Bananas and Apples
(10) 3
(11) 4

(12)


Students' Favorite Subjects

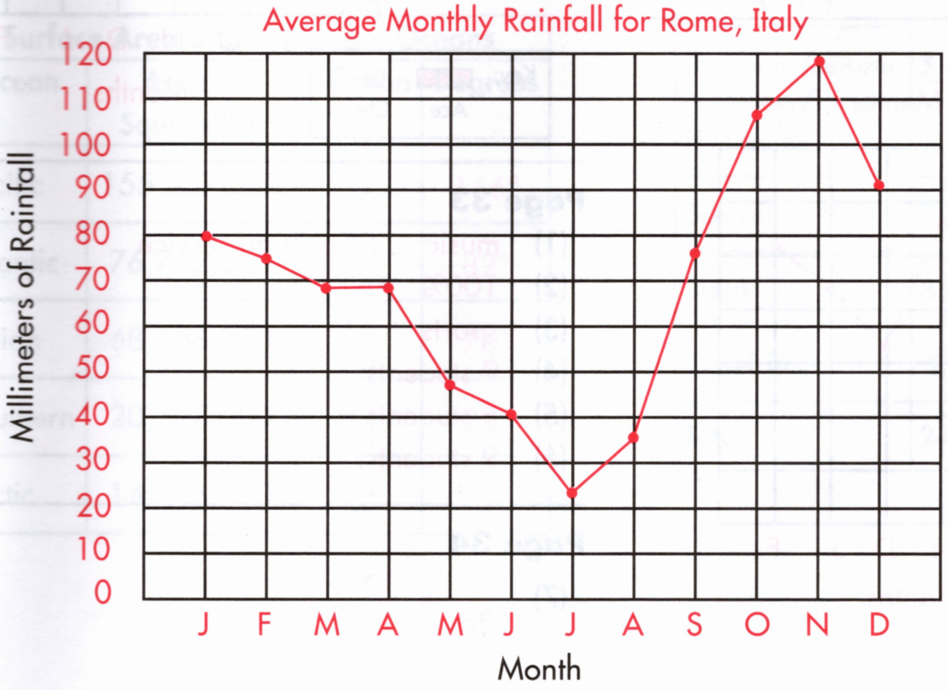
(13) Bible
(14) Boys
(15) $\frac{3}{4}$ . . . 0.75 . . . 75%

Page 29

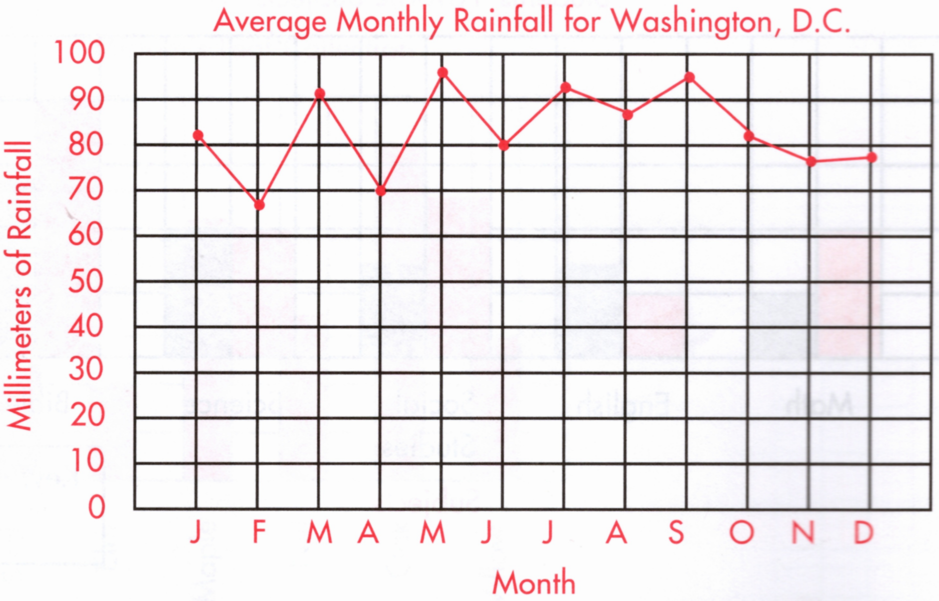
(1) Northern
(2) rain
(3) 10°C
(4) sunny
(5) 10°C
(6) 7.75°C
(7) 12 noon–2 p.m.
(8) 6°C

Page 30

(9)


Average Monthly Rainfall for Rome, Italy

(10)



Page 31

(1) April
(2) October
(3) April and July
(4) Rome
(5) January
(6) July and August
(7) Forbearing one another, . . . forgiving one another, . . . as Christ forgave you, so also do ye. Colossians 3:13

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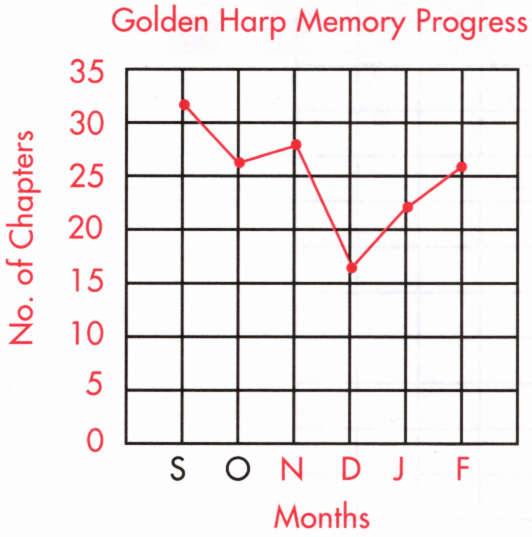
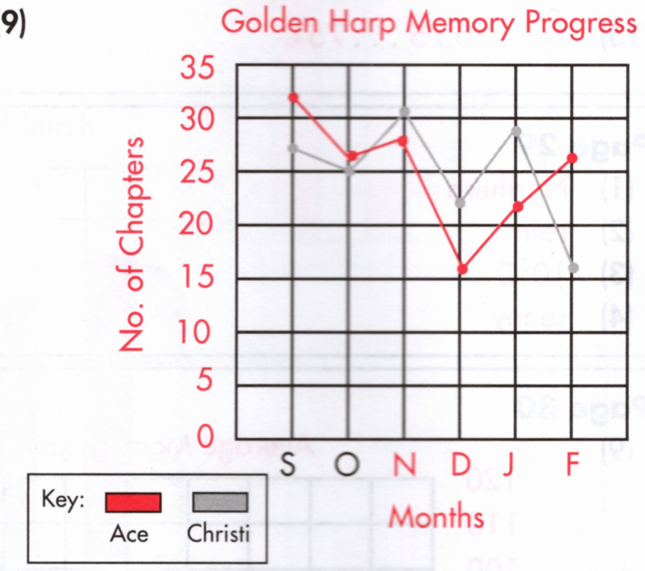
(8)



(9)



Page 33

(1) music . . . Christian service
(2) 100%
(3) sports
(4) 9 students
(5) 8 students
(6) 9 students

Page 34

(7) $\frac{9}{36} = \frac{1}{4}$

(8) $\frac{1}{\underset{1}{\cancel{4}}} \cdot \frac{\overset{90}{\cancel{360^\circ}}}{1} = 90^\circ$

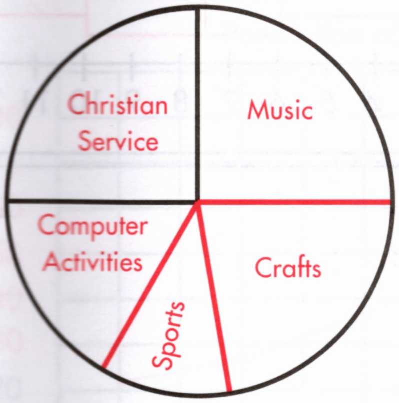
(9) $\frac{4}{36} = \frac{1}{9}$

(10) $\frac{1}{\underset{1}{\cancel{9}}} \cdot \frac{\overset{40}{\cancel{360^\circ}}}{1} = 40^\circ$

(11) $\frac{6}{36} = \frac{1}{6}$

(12) $\frac{1}{\underset{1}{\cancel{6}}} \cdot \frac{\overset{60}{\cancel{360^\circ}}}{1} = 60^\circ$

(13)



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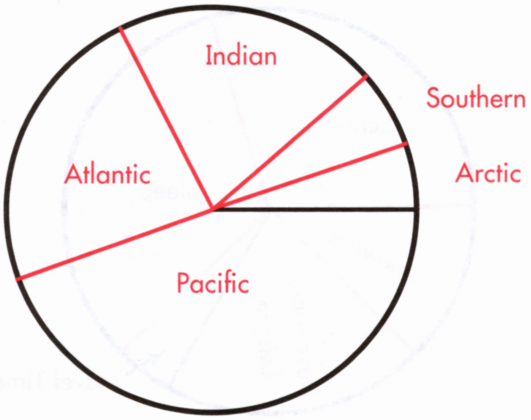
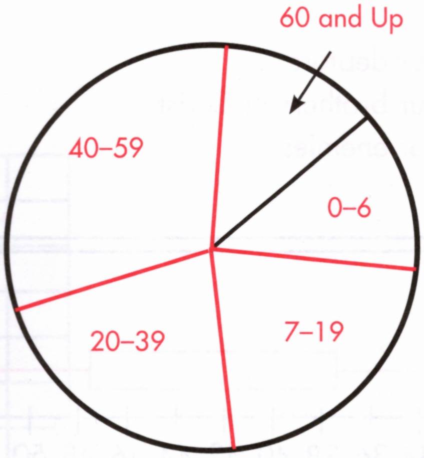
(1)

Surface Area of the World's Oceans			
Ocean	**Area in Square Km**	**Fraction**	**Degrees**
Pacific	155,557,000	$\frac{23}{50}$	166°
Atlantic	76,762,000	$\frac{73}{320}$	82°
Indian	68,556,000	$\frac{19}{90}$	76°
Southern	20,327,000	$\frac{3}{50}$	22°
Arctic	14,056,000	$\frac{1}{25}$	14°

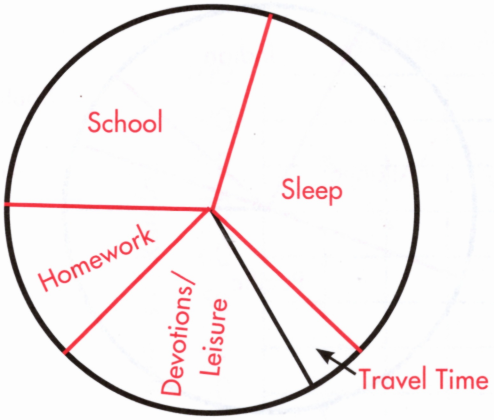


(2)



(3)

Student Activities on a Typical School Day			
Activity	**Time**	**Fraction**	**Degrees**
Devotions/Leisure	**5 hours**	$\frac{5}{24}$	75°
Homework	**3 hours**	$\frac{3}{24} = \frac{1}{8}$	45°
School	**7 hours**	$\frac{7}{24}$	105°
Sleep	**8 hours**	$\frac{8}{24} = \frac{1}{3}$	120°
Travel Time	**1 hour**	$\frac{1}{24}$	15°
Total	**24 hours**		



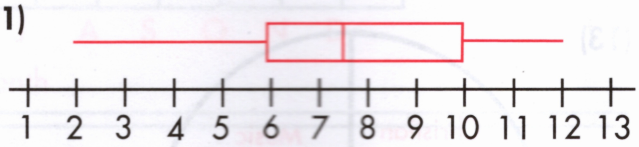
Page 36

(1) (a) our debtors
(b) our brothers in Christ
(c) our enemies

Page 37

(2) 6 inches
(3) 22 inches
(4) 16 inches
(5) 12 inches
(6) 17 inches
(7) 9 inches
(8) 9 . . . 17
(9) 2, 3, 5, 6, 6, 7, 7, 7, 8, 9, 9, 10, 10, 11, 12, 12
(10) $7\frac{1}{2}$ *or* 7.5 . . . 6 . . . 10

(11)



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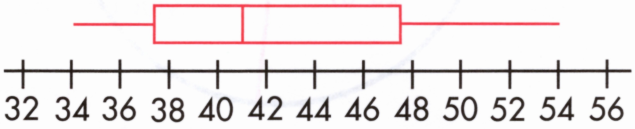
(12)



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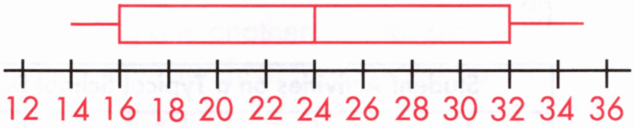
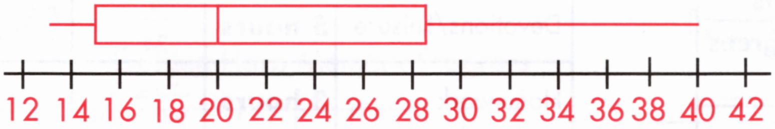


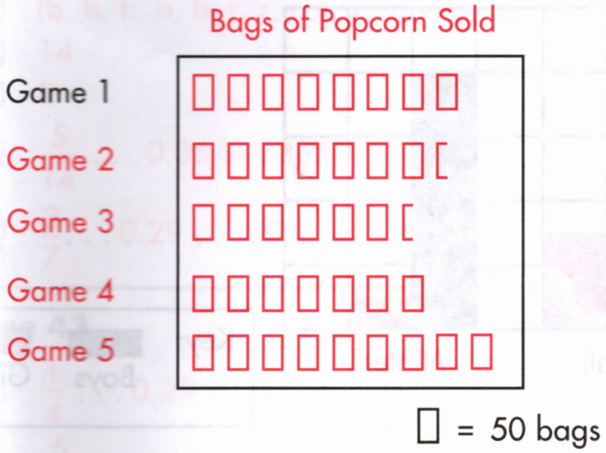
(14)



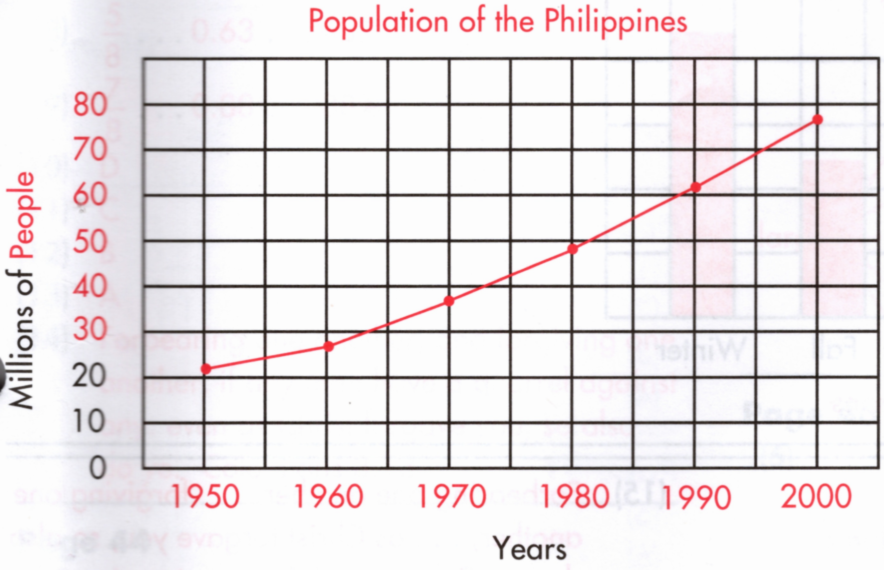
(15) 13, 14, 14, 16, 18, 19, 20, 25, 28, 28, 29, 39, 40
(16) 20 . . . 15 . . . $28\frac{1}{2}$ *or* 28.5
(17) 23
(18) 14 and 28

Page 39

(1)



(2)

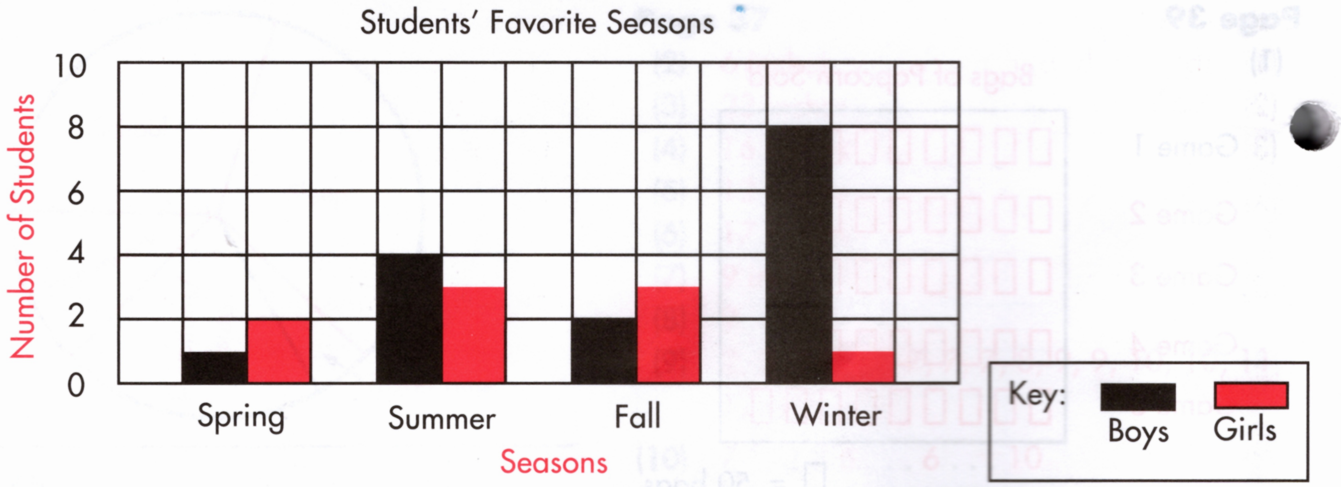


(3) legend
(4) line
(5) vertical . . . horizontal
(6) Circle

Page 40

(7) double . . . two
(8) sector
(9) pie chart
(10) box and whisker plot

(11)



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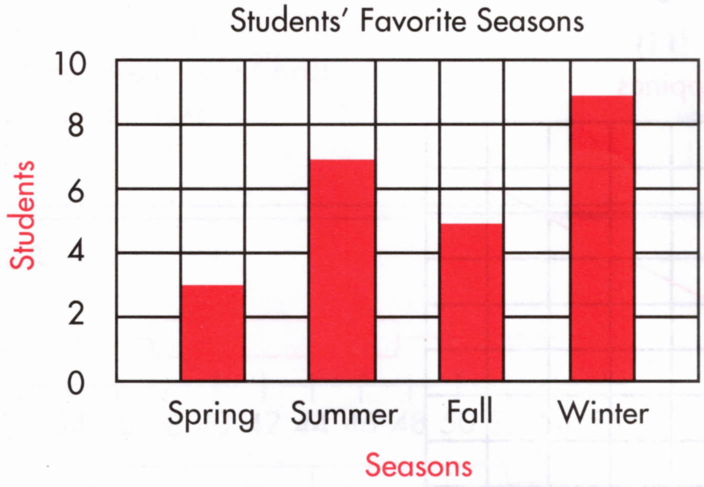

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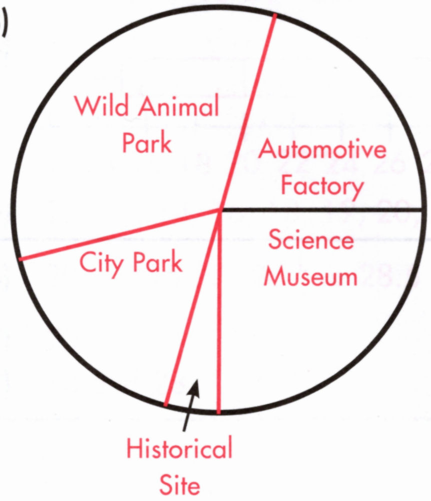
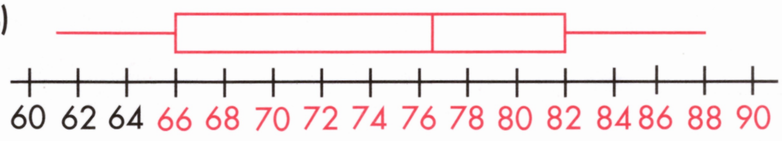
(13)



(14)



(15) Forbearing one another, . . . forgiving one another, . . . as Christ forgave you, so also do ye. Colossians 3:13

Page 42

(1) (b, b, b, b, b, r, r, r, r, y, y, y, g, g)
(2) 14
(3) 0
(4) $\frac{5}{14}$ . . . 0.36 . . . 36%
(5) $\frac{2}{7}$ . . . 0.29 . . . 29%

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(6) $\frac{1}{4}$ . . . 0.25 . . . 25%
(7) $\frac{5}{16}$ . . . 0.31 . . . 31%
(8) $\frac{5}{8}$ . . . 0.63 . . . 63%
(9) $\frac{7}{8}$ . . . 0.88 . . . 88%
(10) D
(11) C
(12) B
(13) A
(14) Forbearing one another, and forgiving one another, if any man have a quarrel against any: even as Christ forgave you, so also do ye. Colossians 3:13

Page 44

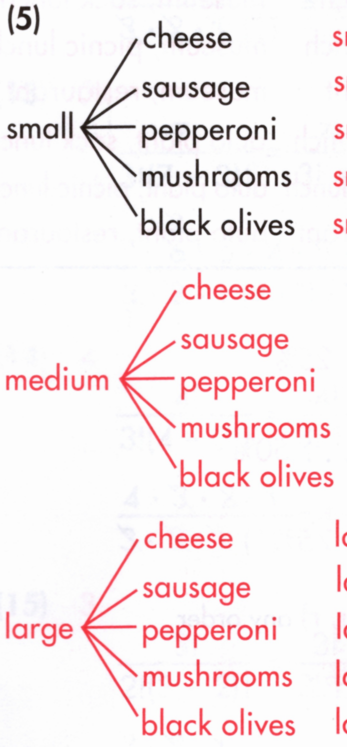
(1) chocolate, hot fudge
chocolate, caramel
chocolate, butterscotch
chocolate, strawberry

vanilla, hot fudge
vanilla, caramel
vanilla, butterscotch
vanilla, strawberry

strawberry, hot fudge
strawberry, caramel
strawberry, butterscotch
strawberry, strawberry

Page 45

(2) 15 pizzas
(3) 16 shirts
(4) 9 choices
(5)


small
cheese
sausage
pepperoni
mushrooms
black olives
medium
cheese
sausage
pepperoni
mushrooms
black olives
large
cheese
sausage
pepperoni
mushrooms
black olives

small, cheese
small, sausage
small, pepperoni
small, mushrooms
small, black olives

medium, cheese
medium, sausage
medium, pepperoni
medium, mushrooms
medium, black olives

large, cheese
large, sausage
large, pepperoni
large, mushrooms
large, black olives

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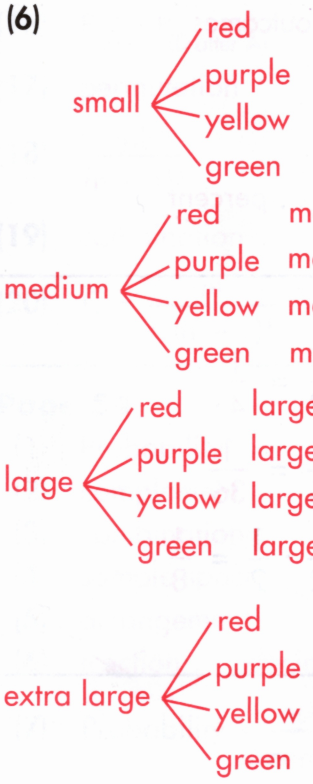
(6)


small
red
purple
yellow
green
medium
red
purple
yellow
green
large
red
purple
yellow
green
extra large
red
purple
yellow
green

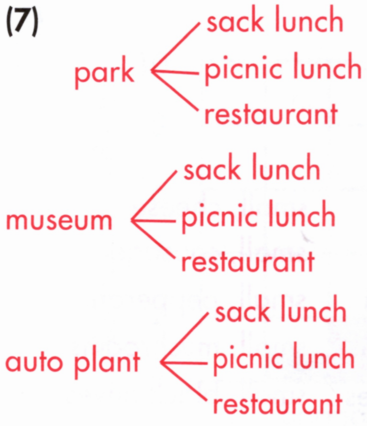
small, red
small, purple
small, yellow
small, green

medium, red
medium, purple
medium, yellow
medium, green

large, red
large, purple
large, yellow
large, green

extra large, red
extra large, purple
extra large, yellow
extra large, green

(7)



park, sack lunch
park, picnic lunch
park, restaurant
museum, sack lunch
museum, picnic lunch
museum, restaurant
auto plant, sack lunch
auto plant, picnic lunch
auto plant, restaurant

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(1) $\frac{1}{4}$ . . . 0.25 . . . 25%

(2) $\frac{2}{4} = \frac{1}{2}$ . . . 0.5 . . . 50%

(3) $\frac{3}{4}$ . . . 0.75 . . . 75%

(4) (b, b, g, g, y, y, r, r) any order

(5) $\frac{1}{4}$ *or* 0.25 *or* 25%

(6) probability

(7) $\frac{\text{number of actual outcomes}}{\text{number of possible outcomes}}$

(8) sample space

(9) 0 *or* zero

(10) 1 *or* one

(11) ratio . . . decimal . . . percent

(12) complement

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(13) $\frac{1}{4}$ $P = \frac{1}{2} \cdot \frac{1}{2} = \frac{1}{4}$

(14) $\frac{1}{36}$ $P = \frac{1}{6} \cdot \frac{1}{6} = \frac{1}{36}$

(15) $\frac{1}{8}$ $P = \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} = \frac{1}{8}$

(16) $P_{(A)} \cdot P_{(D)}$

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(1) $P_{(G)} \cdot P_{(Y \text{ after } G)}$

(2) $\frac{1}{9}$ . . . $\frac{1}{8}$ . . . $\frac{1}{72}$ $\frac{1}{9} \cdot \frac{1}{8} = \frac{1}{72}$

(3) $\frac{2}{9}$

(4) $\frac{1}{8}$

(5) $\frac{2}{72} = \frac{1}{36}$ $\frac{2}{9} \cdot \frac{1}{8} = \frac{2}{72} = \frac{1}{36}$

(6) $\frac{2}{10} = \frac{1}{5}$

(7) $\frac{4}{9}$

(8) $\frac{4}{45}$ $\frac{1}{5} \cdot \frac{4}{9} = \frac{4}{45}$

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(1) 24 $4 \cdot 3 \cdot 2 \cdot 1 = 24$

(2) 5,040 $7 \cdot 6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 = 5{,}040$

(3) 6 $3 \cdot 2 \cdot 1 = 6$

(4) 120 $5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 = 120$

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(5) $3! = 6$

(6) $7! = 5{,}040$

(7) $4! = 24$

(8) $8! = 40{,}320$

(9) Forbearing one another, and forgiving one another, if any man have a quarrel against any: even as Christ forgave you, so also do ye. Colossians 3:13

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(1) 12 $\frac{4!}{2!} = \frac{4 \cdot 3 \cdot \cancel{2} \cdot \cancel{1}}{\cancel{2} \cdot \cancel{1}} = 12$

(2) 60 $\frac{5!}{2!} = \frac{5 \cdot 4 \cdot 3 \cdot \cancel{2} \cdot \cancel{1}}{\cancel{2} \cdot \cancel{1}} = 60$

(3) 210 $\frac{7!}{4!} = \frac{7 \cdot 6 \cdot 5 \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}}{\cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}} = 210$

(4) 11,880

$$\frac{12!}{(12-4)!} = \frac{12!}{8!} =$$

$$\frac{12\cdot 11\cdot 10\cdot 9\cdot \cancel{8}\cdot \cancel{7}\cdot \cancel{6}\cdot \cancel{5}\cdot \cancel{4}\cdot \cancel{3}\cdot \cancel{2}\cdot \cancel{1}}{\cancel{8}\cdot \cancel{7}\cdot \cancel{6}\cdot \cancel{5}\cdot \cancel{4}\cdot \cancel{3}\cdot \cancel{2}\cdot \cancel{1}} =$$

11,880

(5) 20

$$\frac{5!}{(5-2)!} = \frac{5!}{3!} = \frac{5\cdot 4\cdot \cancel{3}\cdot \cancel{2}\cdot \cancel{1}}{\cancel{3}\cdot \cancel{2}\cdot \cancel{1}} = 20$$

(6) 60

$$\frac{5!}{(5-3)!} = \frac{5!}{2!} = \frac{5\cdot 4\cdot 3\cdot \cancel{2}\cdot \cancel{1}}{\cancel{2}\cdot \cancel{1}} = 60$$

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(7) 20

$$\frac{6!}{3!(6-3)!} = \frac{6!}{3!\,3!} =$$

$$\frac{\overset{2}{\cancel{6}}\cdot 5\cdot 4\cdot \cancel{3}\cdot \cancel{2}\cdot \cancel{1}}{\underset{1}{\cancel{3}}\cdot \cancel{2}\cdot 1\,(\cancel{3}\cdot \cancel{2}\cdot \cancel{1})} = 20$$

(8) 70

$$\frac{8!}{4!(8-4)!} = \frac{8!}{4!\,4!} =$$

$$\frac{\overset{2}{\cancel{8}}\cdot 7\cdot \overset{2}{\cancel{6}}\cdot 5\cdot \cancel{4}\cdot \cancel{3}\cdot \cancel{2}\cdot \cancel{1}}{\underset{1}{\cancel{4}}\cdot \underset{1}{\cancel{3}}\cdot \cancel{2}\cdot 1\,(\cancel{4}\cdot \cancel{3}\cdot \cancel{2}\cdot \cancel{1})} = 70$$

(9) 35

$$\frac{7!}{3!(7-3)!} = \frac{7!}{3!\,4!} =$$

$$\frac{7\cdot \overset{2}{\cancel{6}}\cdot 5\cdot \cancel{4}\cdot \cancel{3}\cdot \cancel{2}\cdot \cancel{1}}{\underset{1}{\cancel{3}}\cdot \cancel{2}\cdot 1\,(\cancel{4}\cdot \cancel{3}\cdot \cancel{2}\cdot \cancel{1})} = 35$$

(10) 6

$$\frac{4!}{2!(4-2)!} = \frac{4!}{2!\,2!} = \frac{\overset{2}{\cancel{4}}\cdot 3\cdot \cancel{2}\cdot \cancel{1}}{\underset{1}{\cancel{2}}\cdot 1\,(\cancel{2}\cdot \cancel{1})} = 6$$

(11) 21

$$\frac{7!}{2!(7-2)!} = \frac{7!}{2!\,5!} =$$

$$\frac{7\cdot \overset{3}{\cancel{6}}\cdot \cancel{5}\cdot \cancel{4}\cdot \cancel{3}\cdot \cancel{2}\cdot \cancel{1}}{\underset{1}{\cancel{2}}\cdot 1\,(\cancel{5}\cdot \cancel{4}\cdot \cancel{3}\cdot \cancel{2}\cdot \cancel{1})} = 21$$

(12) 4

$$\frac{4!}{3!(4-3)!} = \frac{4!}{3!\,1!} =$$

$$\frac{4\cdot \cancel{3}\cdot \cancel{2}\cdot \cancel{1}}{\cancel{3}\cdot \cancel{2}\cdot \cancel{1}\,(1)} = 4$$

(13) 35

$$\frac{7!}{3!(7-3)!} = \frac{7!}{3!\,4!} =$$

$$\frac{7\cdot \overset{2}{\cancel{6}}\cdot 5\cdot \cancel{4}\cdot \cancel{3}\cdot \cancel{2}\cdot \cancel{1}}{\underset{1}{\cancel{3}}\cdot \cancel{2}\cdot 1\,(\cancel{4}\cdot \cancel{3}\cdot \cancel{2}\cdot \cancel{1})} = 35$$

(14) 4

$$\frac{4!}{3!(4-3)!} = \frac{4!}{3!\,1!} =$$

$$\frac{4\cdot \cancel{3}\cdot \cancel{2}\cdot \cancel{1}}{\cancel{3}\cdot \cancel{2}\cdot \cancel{1}\,(1)} = 4$$

(15) 3

$$\frac{3!}{2!(3-2)!} = \frac{3!}{2!\,1!} =$$

$$\frac{3\cdot \cancel{2}\cdot \cancel{1}}{\cancel{2}\cdot \cancel{1}(1)} = 3$$

(16) $P_{(A)} \cdot P_{(D\ \text{after}\ A)}$

(17) permutation

(18) $\dfrac{n!}{(n-r)!}$

(19) combination

(20) $C = \dfrac{n!}{r!\,(n-r)!}$

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(1) Probability

(2) complement

(3) combination

(4) sample space

(5) arrangement

(6) fraction . . . decimal . . . percent

(7) $\text{Probability} = \dfrac{\text{number of actual outcomes}}{\text{number of possible outcomes}}$

(8) $P_{(A)} \cdot P_{(D)}$

(9) $P_{(A)} \cdot P_{(D \text{ after } A)}$

(10) $\frac{n!}{(n-r)!}$

(11) $\frac{n!}{r!(n-r)!}$

(12) (r, r, r, r, r, y, y, y, y, g, g, g, g, g, g, bk, bk, bk, o, o)

(13) $\frac{1}{4}$

(14) $\frac{4}{5}$

(15) $\frac{3}{10}$

(16) $\frac{1}{9}$

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(17) 12 $4 \cdot 3 = 12$

(18) $\frac{1}{36}$ $P = \frac{1}{6} \cdot \frac{1}{6} = \frac{1}{36}$

(19) $\frac{1}{25}$ $P = \frac{1}{5} \cdot \frac{1}{5} = \frac{1}{25}$

(20) $\frac{1}{30}$ $\frac{1}{6} \cdot \frac{1}{5} = \frac{1}{30}$

(21) 24 $4 \cdot 3 \cdot 2 \cdot 1 = 24$

(22) 30

$$\frac{6!}{(6-2)!} = \frac{6!}{4!} = \frac{6 \cdot 5 \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}}{\cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}} = 30$$

(23) 15

$$\frac{6!}{4!(6-4)!} = \frac{\overset{3}{\cancel{6}} \cdot 5 \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}}{\cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}(\underset{1}{\cancel{2}} \cdot 1)} = 15$$

(24) 6

$$\frac{4!}{2!(4-2)!} = \frac{4!}{2!\,2!} = \frac{\overset{2}{\cancel{4}} \cdot 3 \cdot \cancel{2} \cdot \cancel{1}}{\underset{1}{\cancel{2}} \cdot 1\,(\cancel{2} \cdot \cancel{1})} = 6$$

(25) Forbearing one another, and forgiving one another, if any man have a quarrel against any: even as Christ forgave you, so also do ye. Colossians 3:13

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(1) mean
(2) range
(3) median
(4) mode
(5) data
(6) Ranking
(7) sector
(8) circle graph
(9) box and whisker plot
(10) statistics
(11) interval
(12) outlier
(13) legend *or* key
(14) (a) 12.8, 13.5, 13.5, 13.7, 13.8, 14.3
(b) 1.5 $14.3 - 12.8 = 1.5$
(c) 13.6 $\frac{81.6}{6} = 13.6$
(d) 13.6 $\frac{13.5 + 13.7}{2} = 13.6$

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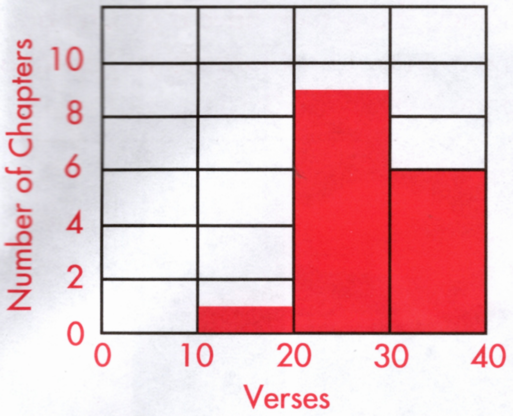
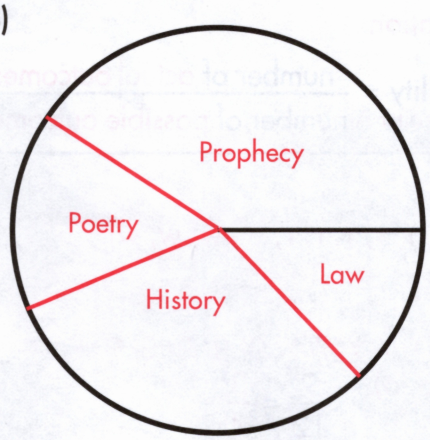
(15)

Verses	Tally	Frequency
1 – 10		0
11 – 20	|	1
21 – 30	𝍸 ||||	9
31 – 40	𝍸 |	6

(16) Chapters in Romans



(18)

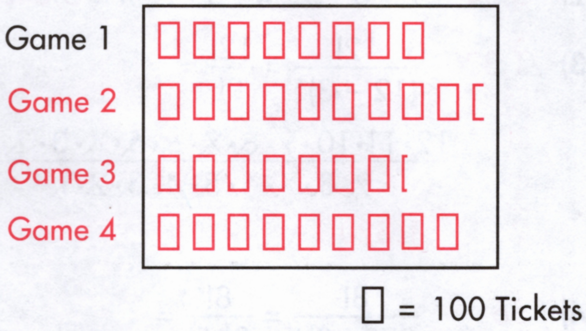


(17) Verses in Each Chapter of Romans

stem	leaf
1	4
2	1 1 1 3 3 5 5 7 9
3	1 2 3 3 6 9

1|4 = 14

(19) Ticket Sales for Basketball Games



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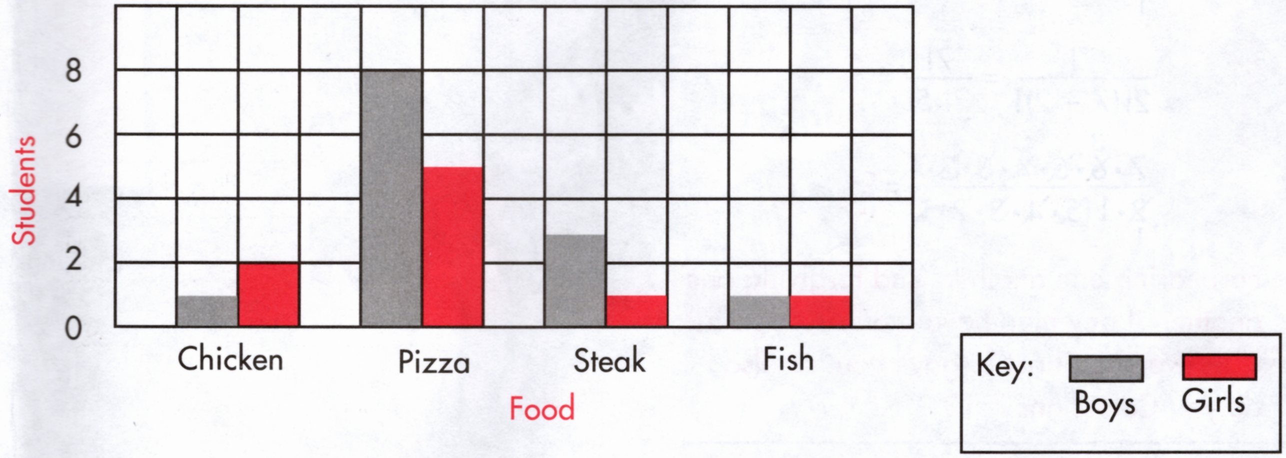
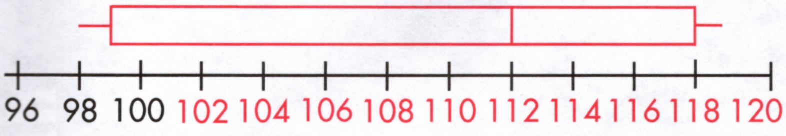
(20) Students' Favorite Foods



(21)



(22) permutation

(23) sample space

(24) complement

(25) probability

(26) combination

(27) $\text{Probability} = \dfrac{\text{number of actual outcomes}}{\text{number of possible outcomes}}$

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(28) (b, b, b, r, r, r, r, r, w, w, w, w)

(29) $\dfrac{5}{12}$

(30) $\dfrac{3}{4}$ $\qquad \dfrac{9}{12} = \dfrac{3}{4}$

(31) 0

(32) 5,040 $\quad 7 \cdot 6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 = 5{,}040$

(33) 1,320 $\quad \dfrac{12!}{(12-3)!} = \dfrac{12!}{9!} =$

$$\frac{12 \cdot 11 \cdot 10 \cdot \cancel{9} \cdot \cancel{8} \cdot \cancel{7} \cdot \cancel{6} \cdot \cancel{5} \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}}{\cancel{9} \cdot \cancel{8} \cdot \cancel{7} \cdot \cancel{6} \cdot \cancel{5} \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}} =$$

1,320

(34) 56 $\quad \dfrac{8!}{3!(8-3)!} = \dfrac{8!}{3!\,5!} =$

$$\frac{8 \cdot 7 \cdot \overset{2}{\cancel{6}} \cdot \cancel{5} \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}}{\underset{1}{\cancel{3}} \cdot \cancel{2} \cdot 1\,(\cancel{5} \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1})} = 56$$

(35) 21 $\quad \dfrac{7!}{2!(7-2)!} = \dfrac{7!}{2!\,5!} =$

$$\frac{7 \cdot \overset{3}{\cancel{6}} \cdot \cancel{5} \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}}{\underset{1}{\cancel{2}} \cdot 1\,(\cancel{5} \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1})} = 21$$

(36) Forbearing one another, and forgiving one another, if any man have a quarrel against any: even as Christ forgave you, so also do ye. Colossians 3:13
